

Applicants: **FUKASAWA et al**
Serial No.: **09/029,608**

Docket No.: **980233**
Group Art Unit: **2814**

H1
cont
external connection protruding electrodes provided to the end portions of the protruding electrodes that protrude from the resin layer,

said external connection protruding electrodes forming a bump.

110. (Amended) The semiconductor device as claimed in claim 109, wherein the resin layer and the semiconductor element have surfaces defined by cutting using a dicer.

111. (Amended) A semiconductor device comprising:

a semiconductor element having a surface on which protruding electrodes having convex end portions are formed;

a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except the convex end portions thereof; and

external connection protruding electrodes provided to the convex end portions of the protruding electrodes that protrude from the resin layer,

said external connection protruding electrodes forming a bump.

H2
115. (Amended) A semiconductor device comprising :

a semiconductor element having a surface on which protruding electrodes are formed; and

a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof,

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the protruding electrodes having a core/portion and an electrically conductive film formed on a surface of the protruding core portion,
wherein the core portion comprises an elastic resin.

116. (Amended) The semiconductor device as claimed in claim 115, wherein the elastic resin is polyimide.

117. (Amended) A semiconductor device comprising:
a semiconductor element having a surface on which protruding electrodes are formed;
a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof; and
external connection protruding electrodes provided to the end portions of the protruding electrodes that protrude from the resin layer,
the protruding electrodes having a core portion and an electrically conductive film formed on a surface of the core portion.

119. (Amended) A semiconductor device comprising:
a semiconductor element having a surface on which protruding electrodes are formed;
a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof; and

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H3
cont external connection protruding electrodes provided to the end portions of the protruding electrodes that protrude from the resin layer,

the protruding electrodes having a core portion and an electrically conductive film formed on a surface of the protruding core portion,

wherein the core portion comprises an elastic resin.

H4
122. (Amended) A semiconductor device comprising :
a semiconductor element having a surface on which protruding electrodes are formed; and
a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof,

the semiconductor element having an outer peripheral portion that is thicker than a central portion thereof,

Sub I3
a part of a side portion of said semiconductor elements being exposed.

123. (Amended) A semiconductor device comprising :
a semiconductor element having a surface on which protruding electrodes are formed;
and
a resin layer formed on the surface of the semiconductor element so as to seal the protruding electrodes except end portions thereof,

a part of a side portion of the semiconductor element being covered with the resin layer,

a part of a side portion of said semiconductor elements being exposed.

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118 129. (Amended) The semiconductor device as claimed in claim 128, wherein a side surface of the resin layer and a side surface of the semiconductor element are flush with each other.